

CLAIMS

1. Closure (1) moulded in closed position with a body (2) comprising fixing means (42) to fix the closure (1) on a neck (18) of a bottle (12), and a lid (3), comprising a sealing mean (23) to seal an orifice (21) of the bottle (12), whereby the body (2) and the lid (3) are separated to each other by a circumferential gap (10), and a snap hinge (4) comprising a first and a second trapezoid element (5.1, 5.2) and a first and a second pair of film hinges (6.1, 6.2; 6.3, 6.4) each pair defining a first and a second plane (48, 49), the first and the second pair of film hinges (6.1, 6.2; 6.3, 6.4) connecting the first and the second trapezoid element (5.1, 5.2) to the lid (2) and to the body (3), whereby the first and the second plane (48, 49) are arranged substantially parallel to an axis A of the closure (1).
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2. Closure (1) according to claim 1 characterized in that the first and the second pair of film hinges (6.1, 6.2; 6.3, 6.4) are arranged at an angle ϕ to each other, and the first and the second plane (48, 49) defined by the first and the second pair of film hinges (6.1, 6.2; 6.3, 6.4) are arranged at an angle ω whereby the relation between the angle ω , the angle ϕ and
10 an opening angle α of the closure (1) is: $\Phi/2 = \text{atan} \left[\frac{\sin(\alpha)}{1 - \cos(\alpha)} \sin\left(\frac{\omega}{2}\right) \right]$
3. Closure (1) according to claim 2, characterized in that the opening angle α is in the range
15 of 180° and 240°
4. Closure (1) according to one of the preceding claims, characterized in that the film hinges (6) and the inner periphery of the closure (1) are designed such that they do not protrude over a main inner radius (R1) of the closure (1).
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5. Closure (1) according to one of the preceding claims, characterized in that the film hinges (6) are defined by a plane (31.1, 31.2) on the inside of the closure (1) and the outside of the film hinges (6) is defined by two flat boundary planes (35), arranged at an angle κ to each other, and a cylindrical boundary surface (33) having a radius (R3).
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6. Closure according to one of the preceding claims, **characterized in that** the trapezoid elements (5) are spaced apart separated by a cutout (9).
7. Closure according to one of the claims 1 to 5, **characterized in that** the trapezoid elements are connected by a film hinge along a shorter edge (7).
- 5 8. Closure according to one of the preceding claims, **characterized in that** the body (2) and the lid (3) are connected by tamper evidence means, which are destroyed by initial opening.
9. Closure according to one of the preceding claims, **characterized in that** the body (2) and the lid (3) are in the open position spaced a distance s apart, whereby distance s is equal to 50% to 90% of the shorter edge (7) of trapezoid elements (5).
- 10 10. Closure according to one of the preceding claims, **characterized by** a cylindrical outer wall section.